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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/767,051

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Young-Chin Chen

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EXAMINER

KUMAR, PREETI

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

03/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/767,051	Applicant(s) CHEN, YOUNG-CHIN	
	Examiner PREETI KUMAR	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/14/2008 and 1/22/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/14/2008 and 1/22/2008 have been entered.
2. Claims 1-3 and 6-16 are pending with claims 14-16 being newly added in the amendment filed 1/22/2008.
3. Claims 1, 6, and 14 are independent with claim 14 requiring a process step of the etching agent being in vessel, which limitation is not presented in independent claims 1 and 6.

Response to Amendment

4. The rejection of claims 1 and 6 under 35 U.S.C. 112, second paragraph is withdrawn in light of Applicants arguments.
5. The rejection of claims 1-3 and 6-13 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kielbania (US 4,507,342) is withdrawn upon further consideration.

Response to Arguments

6. Applicant's arguments filed 1/14/2008 and 1/22/2008 have been fully considered but they are not persuasive. Applicants urge that Kielbania teaches that the printing

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paste and etching agent are mixed and not applied in separate steps. Contrary to Applicants arguments, the instant independent claim 1 specifically recites that the etching agent contacts the transparent printing developer which limitation is met by Kielbania teaching printing paste with sodium bicarbonate catalyst. Furthermore, Kielbania teaches that the quaternary ammonium units provide excellent dye pickup, which printing/dyeing step is a separate step prior to a subsequent chemical etching step with sodium bicarbonate catalyst. See col.8,ln.35-40 and col.14,ln.64, and ex.18.

Applicants urge that the prior art does not teach a translucent pattern. Contrary to Applicant's arguments, Kielbania teaches a conventional printing paste is prepared of three major ingredients: pigment, thickener and binder. Before these ingredients are mixed to form a print paste, a "cut clear" is formed with a thickener. The cut clear is a translucent gel having a consistency over 100,000 cps. See col.32,ln.53-60. Although Kielbania teaches pigment in the printing paste, one of ordinary skill cannot ignore Kielbania's exemplary teaching in example 18 of a control print paste comprising 6% clear cut. Furthermore the instant claims and Applicants specification 20040182821 [0018] do not exclude pigments, dyes or coloring of any sort. Accordingly the teaching of Kielbania is pertinent to the instant claims. See the New Grounds of Rejection below.

New Grounds of Rejection

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claim 14 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Examiner does not find support for the claimed step of "...immersing the printed fabric in a vessel...". Applicants paragraph [0021 on pages 9-10 provides support for the language for the step of "etching treatment in a tank having an etching agent (sodium hydroxide)..."

9. Claims 1-3 and 6-16 are rejected under 35 U.S.C. 103(a) as obvious over Kielbania (US 4,507,342) in view of Ikeda et al. (US 4,292,392).

Kielbania teaches a conventional printing paste is prepared of three major ingredients: pigment, thickener and binder. Before these ingredients are mixed to form a print paste, a "cut clear" is formed with a thickener. The cut clear is a translucent gel having a consistency over 100,000 cps. The cut clear functions as a viscosity builder in the paste. Next a color concentrate is prepared by blending a presscake dispersion (a pigment dispersion in water), a cut clear, and water for about 15 minutes until a creamy flowing paste of about 1950 cps viscosity results. See col.32,ln.53-60.

In example 18a Kielbania teaches a control print paste is prepared by mixing 60 parts of a cut clear containing 6% of the nonionic thickener, 4.3 parts of 35% aqueous pigment dispersion, 30 parts water, 5.8 parts of a 60% solids acrylic binder (97 EA/3 a

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low energy heat curable quaternary ammonium salt vinyl monomer and 0.175 part sodium bicarbonate as catalyst. See examples 18 a and b.

Regarding the claimed temperature of claims 11-13, Kielbania illustrate pigment printed nonwoven polypropylene by applying the pigment paste to Kimberly-Clark spunbonded pinsonic embossed nonwoven polypropylene fabric, by the screen printing process and then cured by heating in a conventional oven at 228 F (108 C) for 3 minutes which teaching encompasses the claimed limitation to bonding and the further step of drying at 50-210 C. See examples 18 a and b.

Regarding the claimed process of printing prior to etching, Kelbania teaches crosslinking the polymer fabric with a quaternary ammonium salt to provide a particularly dyeable fabric by dyes such as acid dyes, metallized dyes and direct dyes. See col.1,ln.33, col.6,ln.30-45. Kelbania teaches that the quaternary ammonium units provide excellent dye pickup, which printing/dyeing step is a separate step prior to a subsequent chemical etching step with sodium bicarbonate catalyst. See col.8,ln.35-40 and col.14,ln.64, and example.18.

Kelbania does not specifically teach that the exemplified sodium bicarbonate catalyst is the etchant as recited by the instant claims. However, Kelbania teaches one of ordinary skill that chemical etching is by means of strongly oxidizing materials, see col.1,ln.33 and Ikeda al. (US 4,292,392) teach the state of the art that sodium bicarbonate is a commonly known etching agent. Specifically, Ikeda et al. teaches nylon photosensitive material etched with an etching solution of 100 cc of an aqueous

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solution containing 0.4 mole of sodium hypochlorite and 1% by weight of sodium bicarbonate. See col.17,ln.44-46.

Kelbania do not teach immersing the printed fabric in a vessel comprising the etching agent as recited by the instant claims 14-16. However, it would have been nonetheless obvious to one of ordinary skill in the art, to arrive at a process for immersing a printed fabric in a vessel comprising an etching agent as recited by the instant claims 14-16 because Kelbania provides motivation to one of ordinary skill in the art to produce a patterned fabric by a 2 step process and further suggests crosslinking the polymer fabric with a quaternary ammonium salt to produce a particularly dyeable fabric, which printing/dyeing step is a separate step done prior to a subsequent chemical etching step with sodium bicarbonate catalyst wherein the fabric is treated in a bath in general and Ikeda et al. teach etching baths are commonly known and specifically teach that etching and development is carried out simultaneously in one bath (in claim 9) or etching can be subsequent to development in a 2 bath process (claim 10). One of ordinary skill in the art would have been motivated to combine the teachings of Kelbania with that of Ikeda et al. since both references teach the analogous art of etching.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PREETI KUMAR whose telephone number is (571)272-1320. The examiner can normally be reached on 7:30 am-3:30 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. K./
Examiner, Art Unit 1796

/VASUDEVAN S. JAGANNATHAN/
Supervisory Patent Examiner, Art Unit 1796